Commonwealth of Kentucky
Division for Air Quality

PERMIT STATEMENT OF BASIS

Title V Draft Permit No. V-97-034(Revision 2)
LOGAN ALUMINUM INC.
RUSSELLVILLE, KY.
May 30, 2000
SHAFIQ S. AMAWI
Plant I.D. # 105-2340-0038
Application Log # G112

SOURCE DESCRIPTION:

Logan Aluminum is an aluminum rolling mill source located in Russellville. The plant produces rolled aluminum from scrap aluminum. Scrap aluminum is charged into two natural gas fired melt furnaces. The molten aluminum will go to holding furnaces to get purified, before it get cast into ingots. The aluminum ingots get heated in carbottoms/ and pusher furnaces before they go to the rolling mills. Most of the rolled aluminum passes through a pretreatment and coating line before it get shipped to customers.

Logan Aluminum submitted a permit application to add a third pusher furnace, increase the fluxing salt usage rate in DC3 hold furnace, emission unit #42(1006-2), and increase the coating material usage rate for pretreatment and coating line, emission unit # 9(6020-A).

COMMENTS:

Since the third pusher furnace is very similar to the two existing furnaces, the Division decided to estimate the emissions using the same emission factors that were used for the existing pusher furnaces. Moreover, Logan Aluminum requested to limit the annual natural gas usage to 300 million cubic feet, to preclude the applicability of Regulation 51:017, Prevention of Significant Deterioration of Air Quality to NO_x emissions.

The increase of the fluxing salt usage rate from 50 to 75 lbs/charge, will trigger an increase in the hydrochloric acid (HCl) emissions. However, the increase in HCl emissions will not cause an exceedance to the existing allowable.

The increase in the coating material annual usage rate from 1.7 to 1.87 million gallon, will cause an increase in the volatile organic compounds (VOC) emissions. However, the increase will not trigger a major modification.

PERIODIC MONITORING:

Logan Aluminum requested to limit the annual natural gas usage to 300 million cubic feet, to preclude the applicability of Regulation 51:017, Prevention of Significant Deterioration of Air Quality to NO_x emissions. Logan Aluminum is required to keep monthly records of the natural gas usage to show continuous compliance with the 300 million cubic feet/year. Moreover, Logan Aluminum will perform a compliance test to show that the emission factor that was used to estimate the NO_x emissions was representative of actual operation.

Logan Aluminum is not close to exceeding the HCl allowable. However, to show continuous compliance, Logan Aluminum is required to keep records of the fluxing salt monthly usage.

VOC emissions from the coating line are subject to Regulation 401KAR60:460, Standards of performance for metal coil surface coating. The regulation requires 90% reduction in VOC emissions. Logan Aluminum has tested the coating line's afterburner on June 24, 1994. The performance test showed the afterburner efficiency to be 99.96%. To ensure the continuous compliance with the 90% reduction in VOC emissions Logan Aluminum shall monitor the combustion temperature and ensure it remains above 1450 ℉, and ensure the VOC content of the coat does not exceed 6.4 lbs/gallon.

CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or record keeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has not incorporated these provisions in its air quality regulations.